

LISTING OF CLAIMS:

1. (Currently amended): Method for assembling a camera module comprising a substrate, a lens and an image sensor chip having a light-sensitive surface, wherein in an assembled state an optical axis of the lens extends in a z-direction and the light-sensitive surface of the image sensor chip extends at a pre-determined sensor surface position perpendicular to the z-direction, the method comprising the following steps:

- a) aligning a detector of a measuring device with the optical axis of the lens;
- b) displacing the lens in the z-direction;
- c) determining an optimal z-position for the lens on the basis of measuring signals from the measuring device, wherein measuring is performed at a measuring position;
- d) bringing the lens to the optimal z-position, preferably fixing the lens with respect to the substrate;
- e) removing the measuring device; and
- f) ~~placing~~ attaching the image sensor chip to the substrate.

2. (Previously presented): Method according to claim 1, wherein the measuring device is positioned at a bottom surface of the substrate.

3. (Previously presented): Method according to claim 1, wherein the measuring device comprises a diaphragm opening aligned with the optical axis of the lens, and a light sensor receiving all light passing through the diaphragm opening, and wherein step c) comprises the step of determining the light intensity detected by the light sensor as a function of the lens position.

4. (Previously presented): Method according to claim 1, further comprising the step of determining a maximum light intensity.

5. (Previously presented): Method according to claim 1, wherein the measuring position coincides with the sensor surface position, and wherein the displacement of the lens is stopped as soon as the optimal z-position is reached.

6. (Previously presented): Method according to claim 4, wherein the measuring position coincides with the sensor surface position, wherein displacement of the lens is continued after having reached the optimal z-position, wherein step c) comprises the step of calculating a distance between the present z-position and the optimal z-position, and wherein step d) comprises the step of displacing the lens in an opposite direction over the calculated distance.

7. (Previously presented): Method according to claim 4, wherein the measuring position is above the sensor surface position, at a pre-determined distance ΔZ_2 , wherein displacement of the lens is continued after having reached a reference z-position at which the measuring signals have a maximum value, wherein step c) comprises the step of calculating a distance ΔZ_1 between the present z-position and the reference z-position, and wherein step d) comprises the step of displacing the lens over a distance $\Delta Z_2 - \Delta Z_1$.

8. (Previously presented): Method according to claim 1, wherein the displacement of the lens takes place step by step.

9. (Previously presented): Method according to claim 8, wherein the measuring position is at a pre-determined distance ΔZ_2 from the sensor surface position, and wherein the predetermined distance ΔZ_2 is larger than one step of the displacement of the lens.

10. (Previously presented): Method, preferably according to claim 1, wherein a lens assembly having a lens is press-fitted in a mount, which is fixedly attached to a substrate or an integral part thereof, the method comprising the step of pushing the lens assembly into the mount until the lens has reached a desired position.

11. (Withdrawn): Positioning device for use in a method according to claim 1, the positioning device comprising: a measuring area for receiving the beam of light as being deflected by the lens; and a detector for measuring the light intensity of the beam of light at the measuring area.

12. (Withdrawn): Positioning device according to claim 11, wherein the measuring area comprises a diaphragm opening, and wherein the detector comprises a light sensor arranged to receive all light passing through the diaphragm opening.

13. (Withdrawn): Positioning device according to claim 12, comprising a recess for accommodating the light sensor, wherein the light sensor is placed at a bottom of the measuring area.

14. (Withdrawn): Positioning device according to claim 11, comprising a support surface adapted for supporting a bottom surface of the substrate.

15. (Withdrawn): Positioning device according to claim 14, wherein the measuring area is above the support surface, at a pre-determined distance ΔZ_2 .

16. (Withdrawn): Camera module, comprising a substrate and a lens assembly having a lens, wherein the lens assembly is press-fitted with respect to the substrate.

17. (Withdrawn): Camera module according to claim 16, wherein the lens assembly is fitted in a cylindrical-shaped mount, the mount being an integral part of the substrate.

18. (Withdrawn): Camera module according to claim 17, wherein the mount comprises at least three elongated ribs being axially oriented, and wherein the ribs are distributed along an inner surface of the mount.

19. (Withdrawn): Positioning apparatus for positioning a lens with respect to a substrate, the positioning apparatus comprising:

a positioning device, preferably according to claim 11;

a controller for receiving measuring signals S from a measuring device;

a controllable manipulator for displacing the lens with respect to the substrate;

wherein the controller is adapted to actuate the manipulator on the basis of the measuring signals S.

20. (New): Method according to claim 1, wherein the measuring device is removed before the image sensor chip is attached to the substrate, so as to align the light-sensitive surface of the image sensor chip with the optical axis of the lens.